

Attorney Docket No.: T4903.CIP (UT-0003)
Inventors: Rao et al.
Serial No.: 09/073,881
Filing Date: May 6, 1998
Page 2

This listing of the claims will replace all prior versions
and listings of claims in the application:

Listing of the claims:

Claim 1. (Currently amended): A method for generating
mammalian neural crest stem cells comprising:

(a) obtaining mammalian neuroepithelial stem cells derived
from the neural tube from a mammalian embryo at a stage of
embryonic development after closure of the neural tube by:

(i) removing a sample of neural tube tissue from a
mammal at a stage of embryonic development after closure of the
neural tube;

(ii) dissociating cells comprising the sample of neural
tube tissue removed from the mammal; and

(iii) plating the dissociated cells in feeder-cell-
independent culture on a substratum and in a media comprising
fibroblast growth factor and chick embryo extract so that
mammalian neuroepithelial stem cells are obtained;

(b) harvesting the mammalian neuroepithelial stem cells by
trypsinization; and

(c) replating the harvested mammalian neuroepithelial stem
cells onto a fibronectin substrate and in a media comprising

Attorney Docket No.: T4903.CIP (UT-0003)
Inventors: Rao et al.
Serial No.: 09/073,881
Filing Date: May 6, 1998
Page 3

chick embryo extract, NGF, FGF and EGF to generate neural crest stem cells.

Claims 2-14 (canceled)

Claim 15 (currently amended): A method for generating rat neural crest stem cells comprising:

61 (a) obtaining rat neuroepithelial stem cells derived from the neural tube from a rat embryo at a stage of embryonic development after closure of the neural tube by:

(i) removing a sample of neural tube tissue from a rat at a stage of embryonic development after closure of the neural tube;

(ii) dissociating cells comprising the sample of neural tube tissue removed from the rat; and

(iii) plating the dissociated cells in feeder-cell-independent culture on a substratum and in a media comprising fibroblast growth factor and chick embryo extract so that rat neuroepithelial stem cells are obtained;

(b) harvesting the rat neuroepithelial stem cells by trypsinization; and

(c) replating the harvested rat neuroepithelial stem cells onto a fibronectin substrate and in a media comprising chick

Attorney Docket No.: T4903.CIP (UT-0003)
Inventors: Rao et al.
Serial No.: 09/073,881
Filing Date: May 6, 1998
Page 4

embryo extract, NGF, FGF and EGF to generate rat neural crest stem cells.

Claim 16 (canceled)

Claim 17 (previosuly added): A method for isolating mammalian neural crest stem cells comprising:

GI (a) generating neural crest stem cells in accordance with the method of claim 1; and

(b) isolating the neural crest stem cells via antibody capture with an antibody against neurotrophin receptor p75.

Claim 18 (previosuly added): A method for isolating rat neural crest stem cells comprising:

(a) generating rat neural crest stem cells in accordance with the method of claim 15; and

(b) isolating the rat neural crest stem cells via antibody capture with an antibody against neurotrophin receptor p75.
